

~~TOP SECRET~~

1628

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

15 April 1976

MEMORANDUM FOR: The Director of Central Intelligence

FROM : David H. Blee
Acting Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): A Useful Book
on Setting Up Communications in a Front

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article is a review of a book on setting up communications in a front during a movement forward for commitment to an engagement in the initial period of a war. The reviewer finds the book useful, but points out several inadequacies such as a lack of quantitative indices, generalized or inadequate information and calculations, and failure to consider the full impact of the initial nuclear strike on radio communications. This article appeared in Issue No. 3 (76) for 1965.

50X1-HUM

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

50X1-HUM

David H. Blee

~~TOP SECRET~~

~~TOP SECRET~~



50X1-HUM

Distribution:

The Director of Central Intelligence

The Joint Chiefs of Staff

The Director, Defense Intelligence Agency

The Assistant to the Chief of Staff for Intelligence
Department of the Army

The Assistant Chief of Staff, Intelligence
U. S. Air Force

Director, National Security Agency

Deputy Director of Central Intelligence

Deputy Director for Intelligence

Deputy Director for Science and Technology

Deputy to the Director of Central Intelligence
for National Intelligence Officers

Director of Strategic Research

50X1-HUM

~~TOP SECRET~~



~~TOP SECRET~~

Intelligence Information Special Report

Page 3 of 9 Pages

50X1-HUM

COUNTRY USSR

DATE OF
INFO. Late 1965

DATE 15 April 1976

SUBJECT

MILITARY THOUGHT (USSR): A Useful Book on Setting Up
Communications in a Front

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (76) for 1965 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is General-Mayor of Communications Troops I. Kurnosov. This article is a review of a book by General-Mayor of Communications Troops M. K. Dodenko concerning the setting up of communications during a movement of front troops for the commitment to an engagement in the initial period of a war. The reviewer finds the book useful, but points out several inadequacies such as a lack of quantitative indices, generalized or inadequate information and calculations, and failure to consider the full impact of the initial nuclear strike on radio communications.

End of SummaryComment:

General-Mayor of Communications Troops I. Kurnosov was a lecturer and candidate of military sciences. He was deceased as of 4 May 1966. He also wrote an article which appeared in Issue No. 2 (63) for 1963, "Creating a New Communications System". The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

50X1-HUM

50X1-HUM

50X1-HUM

~~TOP SECRET~~

~~TOP SECRET~~

Page 4 of 9 Pages

A Useful Book
by
General-Mayor of Communications Troops I. Kurnosov

The complexity of directing the movement forward of large masses of troops over great distances has immeasurably heightened the role of communications as the basic means of control. For this reason, the study and working out of the questions of setting up communications under these conditions, as well as measures directed toward ensuring the centralized use of various communications systems, are very important and urgent tasks of operational art.

In this regard, interest is aroused by General-Mayor of Communications Troops M. K. Dodenko's book, The Setting Up of Communications in a Front During Movement from the Depth of the Theater of Military Operations for Commitment to an Engagement and Operations in the Initial Period of a War,* published by the Military Academy of the General Staff of the Armed Forces of the USSR.

There is no doubt as to the timeliness of the work, and from this point of view the military reader can only applaud the Academy's efforts to state and resolve so many critical and complex questions, including the setting up of control and communications. The work is also valuable in that all the calculations were made proceeding from the forces and means of communications which the troops really possess, that is, such conditions were taken in which it will actually be necessary to decide questions of setting up communications in the first operations of the initial period of a war.

*General-Mayor of Communications Troops M. K. Dodenko. The Setting Up of Communications in a Front During Movement from the Depth of the Theater of Military Operations for Commitment to an Engagement and Operations in the Initial Period of a War. A publication of the Military Academy of the General Staff, 1964, 104 Pages, 8 diagrams.

~~TOP SECRET~~

TOP SECRET

Page 5 of 9 Pages

Stated in the book are the demands made on communications, the basic principles for setting up a front communications system in the process of a movement forward, and recommendations concerning questions of setting up communications in this complex form of troop combat activity.

Examining the operational conditions of the initial period of a war which influence control and the setting up of communications (pp. 8-16), the author emphasizes that the use of various technical means for troop control will be very diverse, the number of communications means will be sharply limited, and the tasks complex. Moreover, the degree to which the enemy takes action against the various elements of the communications system with the goal of disrupting its work increases incredibly.

Here are cited a brief description of various conditions of the movement of front troops from the depth, the expected pace of relocation of the troops (the speed of movement of a column is 20 to 30 kilometers per hour, and the extent of a day's move -- 250 to 300 kilometers and greater), the possible variants of the setting up and relocation of control posts (pp. 6-8), and a brief description of individual information flows.

Especially emphasized is the complexity of control when control posts are in motion, when troops are moving forward by various methods, and when coordinating matters of cooperation with the armies of the Warsaw Pact countries and with one's own troops operating up ahead.

In our opinion, the conditions of a movement forward not only of the combined-arms large units, but of the air army, air defense large units, and units and facilities of the rear should have been shown. This is even more in order, as the author subsequently plans a unified, centralized communications system to support the front troops.

Not denying the validity of the logical arguments, in assessing the various factors affecting the communications system, and in substantiating the demands made on it, quantitative indices should have been more widely employed, which would allow a stricter assessment of the correctness of one variant or the other for setting up a communications system. The inevitability of the disruption of the communications system as a result of the initial nuclear strikes should have been especially emphasized, and the complexity of restoring it within limited periods of time while demands on it are not reduced should have been shown.

50X1-HUM

In the book a description is given of the existing state of communications systems of some of the countries of the Western Theater of

TOP SECRET

~~TOP SECRET~~

Page 6 of 9 Pages

Military Operations upon whose territories a movement forward can be carried out (pp. 17-24). Such generalized material has a certain value, although it is not sufficient to substantiate the capabilities for setting up a communications system. Information is especially scanty concerning questions of the use of radio communications means and the assignment of direct and alternate communications channels at those points which coincide with the location of various centers of the communications system.

The substantiation of the principles of the communications system (pp. 25-33) is preceded by the enumeration of communications forces and means which a front can have in the initial period of a war, and of its capabilities for the deployment and support of the work of various elements of the communications system. In doing so, the author concludes that the field means of communications must not be expended before the front is committed to an engagement and that during a movement forward a communications system should be set up by means of the wide use of state communications installations, and communications centers and lines set up by the General Headquarters.

The author suggests a series of practical measures that must be carried out in peacetime in order to prepare the state communications system to the greatest degree for the control of front troops. As a whole they do not arouse any objection.

However, in our opinion, some of his assertions are not sufficiently grounded. For example, practice does not bear out the capability to set up in 20 to 22 hours a radio-relay line extending 1200 kilometers. These time limits should be increased by at least four times. That being the case, then actually only those lines of the General Headquarters which will have been set up beforehand or begun not less than five days before the troop movement can be used.

As concerns a communications system, here too, all the questions have not been fully resolved. For example, casual mention was made regarding the very important element of auxiliary communications centers, but there were no well-grounded calculations whatsoever of their needs or their organizational-technical setup.

In addition, the entire system is calculated only for the control of the advancing troops, not taking into account the possibility that combat actions could occur in the course of the movement. The most vulnerable spot in the proposed system is the lack of calculations concerning the 50X1-HUM disruption of the system during the delivery of the initial nuclear

~~TOP SECRET~~

~~TOP SECRET~~

Page 7 of 9 Pages

strikes. Although in itself this period is of short duration, it is characterized by particular complexity and tension. In addition to physical losses in personnel and in the technical means of control, elements of confusion and even panic are unavoidable. Such facts as the possible withdrawal of some of the personnel from various installations of the Ministry of Communications, the massive breakdown of external structures, damage to main and connecting cable lines by electromagnetic radiation resulting from nuclear bursts, disturbance of atmospheric, tropospheric, and stratospheric conditions, which impede the work of radio communications, cannot be ignored. And all of this takes place in that period when information concerning the events in progress is especially needed. There is no need to argue that excessive nervousness might occur in the work of the staffs.

In the book much space is allotted to matters of setting up communications on the territory of a military district by various means in time of peace and war, as well as the procedure for using them when front troops are moving forward and being committed to an engagement. The author's practical recommendations concern the determination of the places of deployment of various communications centers, the direction and capacity of various communications lines, and the allocation of the efforts of troops of the General Headquarters and the front, and government communications troops, and the procedure for joint work with organs of the Ministry of Communications.

The author cites possible variants in the calculation of the necessary number of communications channels during the movement forward and commitment of a front to battle. It is apparent from Table 1 (p. 46) that in order to ensure the control of front troops during a movement forward the following are needed: 69 communications channels from the command post, 17 from the forward command post, and 13 from the rear control post. Accordingly, on the links from the front command post to the General Staff and from the front command post to the subordinate formations there should be two telephone channels each, including one for government communications. The author estimates that during their commitment to an engagement the minimum number of communications channels needed to control the troops of a front consists of: 127 from the command post, 38 from the forward command post, and 44 from the rear control post (p. 52).

Speaking of the inaccuracies of the estimate, it should be noted that the author makes no distinction between the qualitative aspect of the channels formed by different means. In addition, on the majority of links one channel each is assigned, that is, that minimum for which no special

~~TOP SECRET~~

50X1-HUM

~~TOP SECRET~~

Page 8 of 9 Pages

calculations are required.

Rendering what is due to the positive qualities of wire and radio-relay means, the author considers radio communications to be the main means of control during a movement forward of front troops and their commitment to an engagement, and shows all of its merits, without which it would not be possible to rely on the continuity of control. One must agree with the assertion that the absolute prohibition of the use of radio means for control of advancing troops is impossible. Therefore the main effort should be directed not toward searching for ways to do without the employment of radio communications but toward searching for effective ways to camouflage their operation. Questions of radio camouflage, incidentally, have not been dealt with sufficiently in the work; there are no specific recommendations and necessary calculations concerning its implementation.

The section about the employment of messenger means of communications (pp. 70-72) is set forth without considering the reorganization of the messenger means of communications and the military postal service into the courier-postal communications service, and for this reason, it is not particularly valuable.

Examining questions of increasing the survivability of a communications system (pp. 74-83), the author, in our opinion, overestimated the degree of effect of high-altitude nuclear bursts on the state of shortwave radio communications. At the front level, the relative proportion of the shortwave radio communications using reflected waves is relatively small, and the destruction of the ionosphere is not so grave a danger. We are compelled to make these remarks not because the effect of high-altitude nuclear bursts in general merits no consideration, but so that these bursts will not be overestimated, and that many efforts will not be unnecessarily expended. Consideration must be given to questions of the occurrence of electromagnetic radiation capable of creating currents in the cable systems sufficient for the combustion (in the fullest sense of the word) of these lines at great distances from the ground zero of the burst.

50X1-HUM

~~TOP SECRET~~

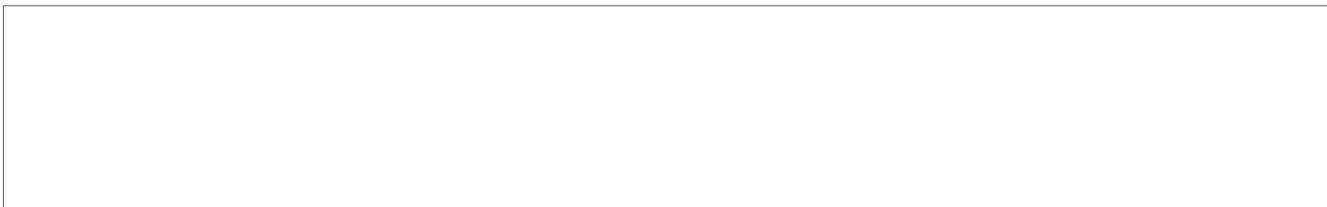
~~TOP SECRET~~



Page 9 of 9 Pages

As a whole, the book being reviewed is helpful to generals and staff officers of front and army formations during the study and working out of questions concerning troop control and the setting up of communications during a movement forward and commitment to an engagement of front troops. At the same time we think that the problems it touches upon are far from being completely resolved and that this subject calls for additional research.

50X1-HUM



50X1-HUM



~~TOP SECRET~~

50X1-HUM

Page Denied